

Appl. No. 10/628,928
Reply to Office Action of September 9, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of processing a light sensitive planographic printing plate precursor comprising a support, and provided thereon, a light sensitive layer and an overcoat layer in that order, the method comprising the steps of:
imagewise exposing the light sensitive planographic printing plate precursor;

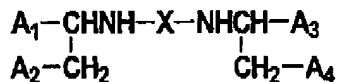
pre-washing the exposed light sensitive planographic printing plate precursor with a pre-washing solution in the presence of a compound represented by the following formula (1) or (2), or an N-alkyliminodiacetic acid or its salt, the alkyl having a carbon atom number of 1 to 3 being a methyl group, an ethyl group, a propyl group, an isopropyl group, a hydroxyl group-substituted methyl group, a hydroxyl group-substituted ethyl group, a hydroxyl group-substituted propyl group, or a hydroxyl group-substituted isopropyl group; and

developing the pre-washed light sensitive planographic printing plate precursor with a developer,

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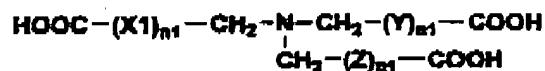
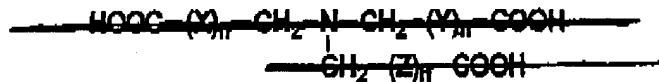
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Formula (1)



wherein A_1 , A_2 , A_3 , and A_4 independently represents $-\text{CH}_2\text{OH}$, $-\text{PO}_3(\text{M}_1)_2$, or $-\text{COOM}$, in which M and M_1 independently represent a hydrogen atom, an ammonium group, an alkali metal atom or an organic ammonium group, and may be the same or different; and X represents an alkylene group having a carbon atom number of 2 to 4 or $-(B_1\text{O})_n-(B_2)-$, in which B_1 and B_2 independently represent an alkylene group having a carbon atom number of 1 to 5, and may be the same or different, and n is an integer of 1 to 8,

Formula (2)



wherein $[(X)]$ $\underline{x1}$, y and z independently represents $-\text{CH}_2-$, $-(\text{CH}_2)_2-$, or $-\text{CHOH}-$, and $[(n)]$ $\underline{n1}$ is 0 or 1.

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2. (Original) The method of claim 1, wherein the pre-washing is carried out employing a pre-washing solution which is an aqueous solution containing the compound represented by formula (1) or (2), or the N-alkyliminodiacetic acid or its salt.

3. (Original) The method of claim 2, wherein the pre-washing solution is an aqueous solution containing a compound represented by formula (1).

4. (Original) The method of claim 2, wherein the pre-washing solution is an aqueous solution containing an N-alkyliminodiacetic acid or its salt, the alkyl having a carbon atom number of 1 to 3.

5. (Original) The method of claim 2, wherein the pre-washing solution contains the compound represented by formula (1) or (2), or the N-alkyliminodiacetic acid or its salt in an amount of from 0.001 to 1.0% by weight.

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6. (Original) The method of claim 1, further comprising the step of post-washing the developed light sensitive planographic printing plate precursor with post-washing water.

7. (Original) The method of claim 2, wherein the pre-washing solution is re-circulated and supplied onto the surface of the printing plate precursor through a spray.

8. (Original) The method of claim 7, wherein the amount of the pre-washing solution to be supplied onto the surface of the printing plate precursor is from 0.5 to 20 liters per m² of the printing plate precursor.

9. (Original) The method of claim 2, wherein the temperature of the pre-washing solution is from 15 to 65 °C.

10. (Original) The method of claim 1, wherein the overcoat layer contains polyvinyl alcohol or polyvinyl pyrrolidone.

11. (Original) The method of claim 1, wherein the developer contains an alkali metal containing compound selected from the

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group consisting of potassium silicate, sodium silicate, lithium silicate, potassium metasilicate, sodium metasilicate, lithium metasilicate, potassium phosphate, sodium phosphate, lithium phosphate, potassium hydrogenphosphate, sodium hydrogenphosphate, lithium hydrogenphosphate, potassium carbonate, sodium carbonate, lithium carbonate, potassium hydrogen carbonate, sodium hydrogen carbonate, lithium hydrogen carbonate, potassium borate, sodium borate, or lithium borate.

12. (Original) The method of claim 11, wherein the alkali metal containing compound is potassium silicate or sodium silicate.

13. (Original) The method of claim 12, wherein the concentration of the silicate in the developer is from 1.0 to 3.0% by weight in terms of SiO₂ concentration.

14. (Original) The method of claim 11, wherein the developer further contains a weak acid having an acid dissociation constant of from 10.0 to 13.2.

Oct. 19. 2004 . 3:38PM FRISHAUF & PARTNERS

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15. (Original) The method of claim 1, wherein the pH of the developer is from more than 8.5 to less than 13.0.

16. (Currently Amended) The method of claim 1, wherein the overcoat layer contains a compound selected from [[a]] the compound of formula (1) or (2), and [[an]] the N-alkyliminodiacetic acid or its salt.